Investigation of the Physico-Chemical Processes of Sulphidation
by the Dilatometric Method

SOV/129-58-10-7/14

results the following conclusions are arrived at:
sintering at 200 to 300°C of a charge consisting of
powder iron and sulphur brings about the formation of
iron sulphides; this is confirmed by the changes in the
dilatometric curves of the specimens and chemical
analysis of powder mixtures heated to these temperatures;
for obtaining sulphide films (anti-seizure coatings),
sulphidation of hardened components can be effected at
180 to 200°C by combining the process of sulphidation
with tempering of the components after hardening.
There are 4 figures, 2 tables and 5 references,
4 of which are Soviet, 1 English.

ASSOCIATION: NATI

1. Iron alloys—Sintering   2. Sintering—Chemical effects
3. Sintering—Temperature factors   4. Sulfur—Thermal effects

Card 2/2

Gil'man, T.P.

9(2)(25(1)

PHASE I BOOK EXPLOITATION   SOV/2313

Akademiya nauk SSSR. Institut mashinovedeniya

Povysheniye stoykosti detaley mashin /sul'fidirovaniye/; sbornik statey (Increasing the Wear Resistance of Machine Parts /Sulfurization/; Collection of Articles) Moscow, Mashgiz, 1959. 126 p. Errata slip inserted. 4,500 copies printed.

Ed. (Title page): N. M. Khrushchov, Doctor of Technical Sciences; Ed. (Inside book): A.O. Nikitin, Engineer; Tech. Ed.: V.D. El'kind; Managing Ed. for Literature on General Technical and Transport Machine Building (Mashgiz: L.A. Romanova, Engineer.

PURPOSE: This collection of articles is intended for engineering and technical workers of machine-building and overhauling plants.

COVERAGE: This book presents results of investigations of methods to increase the resistance of machine parts to seizure. A new method of sulfurization which improves the friction behavior of cast iron and steel and an analysis of the effect of sulfurization on the antifriction properties and wear of metal are given. These articles are the transactions of a seminar held at the Institute of Mechanical Engineering of the Academy of Sciences, USSR, in December 1956.

TABLE OF CONTENTS:

Dzhanovskaya, N.S., Doctor of Chemical Sciences, Ye. A. Alekseyeva, and N.V. Khakhlova, Engineerr. Selecting Salt Baths for Sulfurization of Iron Alloys
The authors recommend the use of a salt bath as the most controllable and uniform method of sulfurization. They develop the compositions of these baths and the optimum temperatures of operation.   62

Zinovich, N.S., Engineer. Investigation of the Sulfurization Process
The author discusses sulfurization in the liquid bath, baths operating at medium and low temperatures, control of the process, x-ray and metallographic investigations, hardness, work-in, and wear resistance tests.   79

Belmaeva, V.D., Engineer. X-ray Analysis of the Surface Layer of Sulfurized Specimens
The author investigated various bath compositions by x-ray analysis in order to evaluate the character of sulfurization in respect to simultaneous formation of nitrides.   95

Gil'man, T.P., Engineer. Sulfurization of Iron Carbide With C   99
The author describes a process in which a sulfur suspension in mineral oil and ammonia are introduced together into the furnace. This process is a combined sulfurizing and cyaniding process having several advantages in comparison with other sulfurization methods according to the author.

Gil'man, T.P., Engineer. Sulfurization of Bushings Made of Iron Powder by Introducing Sulphur Into the Charge   105
The author describes the results of experiments using a method claimed by the author to be new. The work was carried out at Stalingrad Tractor Plant in collaboration with NATI (Automobile and Tractor Scientific Research Institute). The author stresses the advantages of this process which gives a uniform distribution of sulfides in the metal.

S/191/60/000/010/015/017
B004/B060

AUTHORS: Perlin, S. M., Gil'man, T. P., Leytes, A. Z.

TITLE: Study of the Completeness of Hardening of Unsaturated
                Polyester Resins by the Dilatometric Method

PERIODICAL: Plasticheskiye massy, 1960, No. 10, pp. 64-68

TEXT: The authors studied the hardening degree of ПН-1 (PN-1) resin by
the use of different initiators and catalysts. The previously performed
tests for Rockwell heat, bending strength, and water absorption showed
that no clear knowledge can be obtained concerning the hardening on the
basis of physicomechanical tests. An investigation was therefore conducted
with a Schevenaar differential dilatometer of the firm Amsler. Dilatation
curves displayed breaks with insufficient hardening of the resin. The
following optimum values were obtained for the addition of initiator and
catalyst: 3% cumene hydroperoxide (initiator) and 6-8% cobalt naphthenate
(catalyst). At 1.5% benzoyl peroxide and 0.6% dimethyl aniline a complete
hardening was attained only after repeated heating. Dilatometric curves
of the following glass reinforced plastics were also taken: 1) 30%

Card 1/2

Study of the Completeness of Hardening of   S/191/60/000/010/015/017
Unsaturated Polyester Resins by the Dilatometric B004/B060
Method

phenol formaldehyde resin with 70% epoxy resin and glass reglet; 2)
polyester resin with glass reglet; 3) polyester resin with glass fabric;
4) polyester resin with glass mat. The hysteresis of heating and cooling
curves showed that in all specimens hardening was incomplete. There are
8 figures, 4 tables, and 6 references: 2 Soviet, 2 US, and 2 German.

Card 2/2

GIL'MAN, T.P.; PERLIN, S.M.; LEYTES, A.Z.

Electro consistometer for determining the processing time, gelati-
nization, and hardening of resins. Plast.massy no.11:68-71 '60.

(Resins, Synthetic)   (MIRA 13:12)

35279
S/069/62/024/002/004/008
B101/B110

15.1310

AUTHORS: Zubov, P. I., Lepilkina, L. A., Gil'man, T. P.

TITLE: Effect of lubricant and finishing materials on the internal
                stresses and adhesion properties of polyester coatings

PERIODICAL: Kolloidnyy zhurnal, v. 24, no. 2, 1962, 174-177

TEXT: ПН-1 (PN-1) polyester resin films, ~ 2200 μ thick, were applied to
glass parallelepipeds and polymerized at 75°C in the presence of 3% cumene
hydroperoxide and 8/5 cobalt naphthenate dissolved in styrene. One of the
glass surfaces was modified with a preparation, and the internal stress was
measured optically with a self-recording instrument. Adhesion was deter-
mined from the maximum (critical) stress at which the film detached from
the glass. The following modifiers were used: (1) Paraffin emulsion
consisting of stearin, vaseline, and transformer oil with CO-20 (SO-20)
dicyana diamine formaldehyde resin as emulgator: the film detached already
after 30 min. (2)АС-1 (AS-1) disapol, a polymerization product from
butyl methacrylate and methacrylamide in the presence of dibutyl sebacinate:
here, and on unmodified surfaces, at lower internal stress, however,
separation set in after 12 hrs. (3)МФ-17 (MF-17) urea formaldehyde resins
Card 1/3

Effect of lubricant and ...

S/069/62/024/002/004/008
B101/B110

showed better results: film adhesion to glass exceeded 12 hrs. (4) The
best results were obtained with ПВЭ-3 (PVE-3) polyvinyl acetate emulsion
with and without chromolan additions (a cation-active preparation).
Internal stress increased after 30-60 min but was moderated by 0.7%
chromolan. Then, gradual relaxation followed. The film did not detach
from the glass. Tests for the effect of film thickness on its separation
from the glass yielded similar results from the different preparations:
from glass modified with paraffin emulsion, a film thinner than that from
unmodified glass detached, whereas with MF-17 thicker films showed good
adhesion. Data are given for glass reinforced plastics with a 50% content
of glass fiber: the bending strength (a) and internal stress (b) obtained
with paraffin emulsion were 2200 kg/cm^2 and 10.8 kg/cm^2, respectively; with
MF-17 a = 2880, b = 28.6; with AS-1 a = 2596, b = 3.8, and with PVE-3
containing 0.7% chromolan, a = 3300, b = 2.8. There are 4 figures, 1 table,
and 2 Soviet references.

ASSOCIATION:. Institut fizicheskoy khimii AN SSSR, Otdel polimerov
             (Institute of Physical Chemistry of AS USSR, Department of
             Polymers), Vsesoyuznyy nauchno-issledovatel'skiy proyektnyy
             institut ugol'nogo mashinostroyeniya, Moskva (All-Union
Card 2/3   Scientific Research, Design and Planning Institute of Coal,
             Moscow)

Effect of lubricant and ...

SUBMITTED: April 20, 1961

S/069/62/024/002/004/008
B101/B110

Card 3/3

X

S/653/61/000/000/034/051
I007/I207

AUTHORS: Perlin, S.M., Gil'man, T.P., and Leytes, A.Z.

TITLE: Determination of hardening degree of unsaturated
polyester resins by the dilatometric method

SOURCE: Plastmassy v mashinostroyenii i priborostroyenii.
Pervaya resp. nauch.-tekh. konfer. po vopr. prim.
plastmass v mashinostr. i priborostr., Kiev, 1959.
Kiev, Gostekhizdat, 1961, 367-375

TEXT: The paper presents results of dilatometric determinations
of series of physicomechanical properties of polyester resins by
means of the differential dilatometer of the Chevenard system which
yields much better results than conventional dilatometers. As was
found, hardness, water-absorption and bending strength depend on the
hardening degree of the resin. The dilatometric method permits suit-

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S/653/61/000/000/034/051
I007/I207

Determination of hardening degree...

able evaluation of the hardening degree of the above resins; it
makes it also possible to distinguish between the temporary incom-
plete hardening and the constant incomplete hardening. The above
method may also be successfully used for the determination of the
hardening degree of glass-reinforced plastics, of their dimensional
stability and heat resistance. There are 7 figures.

Card 2/2

KLINOV, I.Ya.; KUTSENOK, B.I.; FABRIKANT, T.L.; GIL'MAN, TS.I.

Chemically stable mastics based on a modified asbestos vinyl.
Plast.massy no.2:44-50 '61.   (MIRA 14:2)
        (Plastics)   (Protective coatings)

18 8300 {4016, 1138, 1208

21571

S/020/61/137/003/025/030
B101/B208

AUTHORS: Kolotyrkin, Ya. M., and Gil'man, V. A.

TITLE: Effect of chlorine ions on the electrochemical and
             corrosion behavior of zirconium

PERIODICAL: Doklady Akademii nauk SSSR, v. 137, no. 3, 1961, 642-645

TEXT: It was found in papers by E. A. Gee, L. B. Golden, W. E. Lusby
(Ref. 1, see below), D. F. Taylor (Ref. 2, see below), and L. B. Golden,
I. R. Lane, W. L. Acherman (Ref. 3, see below) that zirconium may be
corroded by chlorine ions under certain conditions. As these papers do
not permit exact conclusions on the causes of this behavior of zirconium,
a more thorough investigation has now been made of the conditions, under
which Zr is corroded by chlorine ions. The dependence of the dissolution
rate of Zr on the potential was determined by a potentiostatic method
described by the authors in Ref. 7 (ZhFKh, $\underline{30}$, 1990, (1956)) and Ref. 8
(DAN, $\underline{114}$, 1265 (1957)). The experiments were performed in 1.0; 0.1;
0.01 N HCl; 1.0 N H_2SO_4, 1.0 N KBr; 1.0 N KI. Pure zirconium (99.8%)

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Effect of chlorine ions on the ...

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S/020/61/137/003/025/030
B101/B208

was used as electrode. The liquid reagents were purified by distillation. The solutions were saturated with N_2 which was bubbled through also during the measurement. Fig. 1 shows the result of the potentiostatic measurements. In H_2SO_4, Zr was passive in the entire potential range studied. In the presence of halogen compounds, however, Zr is dissolved when a critical potential φ_{cr} is attained, φ_{cr} remaining constant irrespective of current density. The following results were obtained in galvanostatic measurements: Temporary positive and negative shifts of the potential are accomplished by increasing and reducing the current density, respectively. The potential always returns to the value φ_{cr}. Measurement of the charge curves also indicated that at first Zr is polarized to more positive values than φ_{cr}. At a constant concentration of Cl^-, the deviation of the potential from φ_{cr} increases with the current density. At constant current density, the deviation increases with decreasing Cl^- concentration. Addition of Fe^{3+} exerted the same effect as application of anodic polarization. φ_{cr} was attained at a certain

Card 2/5

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Effect of chlorine ions on the ...

S/020/61/137/003/025/030
B101/B208

concentration of the iron salt. Further increase of the concentration of Fe^{3+} had no influence. It was found visually that, when φ_{cr} is attained, an irregular corrosion occurs, which gives rise to the formation of pittings, which increases with the current density. With decreasing current density, the pittings are again partly passivated. This reversibility of the process is explained by the fact that at a certain density of the polarization current, the affinity of Zr to the halogen ion is greater than to the passivating oxygen. The passivating oxygen is displaced by the halogen ion. The irregular corrosion may be explained by the permanent nonuniform distribution of the plate current on the metal surface. The assumption that the corrosion process is retarded in time by the formation of primary complexes of the $ZrCl_n^{(4-n)+}$ type could not be experimentally confirmed. It may therefore be assumed that these complexes decompose by hydrolysis, the chlorine ions are again liberated, and thus act as catalysts of corrosion. Mention is made of N. A. Balashova and B. N. Kabanov (Ref. 15: DAN, 121, 126 (1958)) and L. V. Vanyukova (Ref. 14: DAN 59, 917 (1948)).

Card 3/5

Effect of chlorine ions on the ,,,

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S/020/61/137/003/025/030
B101/B208

There are 3 figures and 15 references: 8 Soviet-bloc and 7 non-Soviet-bloc. The 4 references to English-language publications read as follows: E. A. Gee, L. B. Golden, W. E. Lusby, Ind. and Eng. Chem. 41, 1668 (1949); D. F. Taylor, Ind. and Eng. Chem. 42, 639 (1950); L. B. Golden, I. R. Lane, W. L. Acherman, Ind. and Eng. Chem. 44, 1930 (1952); 45, 782 (1953), I. R. Lane, L. B. Golden, W. L. Acherman, Ind. and Eng. Chem. 45, 1067, (1953).

ASSOCIATION: Fiziko-khimicheskiy institut im. L. Ya. Karpova
                 (Physicochemical Institute imeni L. Ya. Karpov)

PRESENTED: October 20, 1960, by A. N. Frumkin, Academician

SUBMITTED: October 13, 1960

Card 4/5

35527

S/020/62/143/003/026/029
B101/B144

/8. 8300

AUTHORS: Gil'man, V. A., and Kolotyrkin, Ya. M.

TITLE: Mechanism of pitting corrosion of zirconium in halide
              solutions .

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 143, no. 3, 1962, 640 - 642

TEXT: In the previous work (DAN, 137, no. 3, 642 (1960)) it ·as presumed
theoretically that pitting corrosion of Zr in chloride solutions was a
consequence of local depassivation of the metal surface by chlorine ions.
This depassivation occurs when the Cl^- concentration reaches a ·ritical
value, thus necessitating an induction period. This assumption was
checked experimentally by measuring the time t_m (sec), which elapses
after imposition of anodic polarization until the minimum φ_m occurs in
the curve φ versus t. Results at various current densities and electrolyte
concentrations are (t_m, sec):

Card 1/3

Mechanism of pitting corrosion...

S/020/62/143/003/026/029
B101/B144

i,a/cm^2	KBr			KCl		
	0.01 N	0.1 N	1.0 N	0.01 N	0.1 N	1.0 N
$5 \cdot 10^{-6}$	1200	1080	-	1410	1290	-
$5 \cdot 10^{-5}$	92.5	78.5	73.5	91	83.2	79.5
$5 \cdot 10^{-4}$	9.6	8.3	7.7	10.0	8.0	6.7

KCl + Na$_2$SO$_4$		KCl + Na$_2$CO$_3$	
a	b	c	d
2545	-	-	-
165	327	174	250
15.8	32.9	16.5	26

Legend: (a) $0.05 \text{ N} [\text{Cl}^-] + 0.05 \text{ N} [\text{SO}_4^{2-}]$
(b) $0.025 \text{ N} [\text{Cl}^-] + 0.075 \text{ N} [\text{SO}_4^{2-}]$
(c) $0.05 \text{ N} [\text{Cl}^-] + 0.05 \text{ N} [\text{CO}_3^{2-}]$
(d) $0.025 \text{ N} [\text{Cl}^-] + 0.075 \text{ N} [\text{CO}_3^{2-}]$

With increasing halide concentration and decreasing current density the
reproducibility of the data decreases. The mean deviation was in the case
of $5 \cdot 10^{-4}$ a/cm^2 and 0.01 N: 5 - 6%; of $5 \cdot 10^{-5}$ - $5 \cdot 10^{-6}$ a/cm^2 and 1.0 N:
18 - 23%. The zirconium specimens were treated with dilute HF. It is
Card 2/3

ACCESSION NR: AP4034543   S/0020/64/155/005/1155/1158

AUTHORS: Gil'man, V. A.; Kolotyrkin, Ya. M.

TITLE: The mechanism of dissolving zirconium in acid fluoride
solutions

SOURCE: AN-SSSR. Doklady*, v. 155, no. 5, 1964, 1155-1158

TOPIC TAGS: zirconium, solution mechanism, dissolution kinetics,
hydrogen evolution kinetics, zirconium oxidation, rate of solution

ABSTRACT: The kinetics of hydrogen evolution and the kinetics of
zirconium dissolution were examined in this investigation to deter-
mine the mechanism by which zirconium is dissolved in acid fluoride
solutions. Data was obtained from solutions of 0.1N H_2SO_4 + xHF
where x is the concentration varied from 10^{-3} to 1N. Pyrex cells
were used for $[HF] \leq 10^{-2}$N and teflon or polyethylene cells for
$[HF] \geq 10^{-2}$N; equivalence of results was claimed. The zirconium
electrode preparation was described previously by the authors (DAN,
137, 642 (1961); DAN, 143, 640 (1962)). Solutions were nitrogen
purged although air does not affect rate. The solution rate was
determined by anode current and by colorimetry using xylenol orange
Card 1/2

ACC NR: AP6015293   (N)   SOURCE CODE: UR/0365/66/002/003/0360/0361

AUTHOR: Gil'man, V. A.; Kolotyrkin, Ya. M. $6 {}^0B$

ORG: Physicochemical Scientific Research Institute im. L. Ya. Karpov (Nauchno-issledovatel'skiy fiziko-khimicheskiy institut)

TITLE: Pitting corrosion of zirconium in perchlorate solutions

SOURCE: Zashchita metallov, v. 2, no. 3, 1966, 360-361

TOPIC TAGS: corrosion, zirconium, perchlorate, chloride

ABSTRACT: A study of zirconium corrosion in 0.1 and 1.0 N $NaClO_4$ and $HClO_4$ and also 0.3 N $LiClO_4$ showed that under spontaneous dissolution and anodic polarization conditions, zirconium is in a passive state until a certain critical potential ϕ_{cr} is reached, at which extensive pitting begins to take place. In this respect, the anodic behavior of Zr in perchlorate solutions is similar to that in chloride solutions, except for the fact that in the latter the critical pitting potential is more positive by almost one whole volt. The value of ϕ_{cr} in perchlorate solutions is determined by the ClO_4^- concentration, increasing by 100 mV for a tenfold decrease of the perchlorate concentration, and, as in the case of chlorides, is independent of the solution pH or the anodic current density. Thus, halide ions are not the only ones to cause the pitting corrosion of zirconium; ClO_4^- ions also have this capacity (although not

Card   1/2   UDC: 620.193.01

Card   2/2

L 04777-67   EWT(m)/EWP(w)/EWP(t)/ETI/EWP(k)   IJP(c)   JD/WW/JG/WB

ACC NR: AP6025725   SOURCE CODE: UR/0365/66/002/004/0490/0492

AUTHOR: Gil'man, V. A.; Kolotyrkin, Ya. M.; Malkina, R. I.

ORG: Scientific Research Physicochemical Institute im. L. Ya. Karpov
(Nauchno-issledovatel'skiy fiziko-khimicheskiy institut)

TITLE: Solution of zirconium in concentrated hydrochloric acid

SOURCE: Zashchita metallov, v. 2, no. 4, 1966, 490-492

TOPIC TAGS: zirconium, corrosion, corrosion rate, electrochemistry,
solution kinetics, chloride, induction melting, metal melting

ABSTRACT: Studies of the corrosion and electrochemical behavior of
zirconium under anodic polarization conditions were continued using
concentrated HCl, 11.5 N. In the passive region, at potentials more
negative than +0.17 v, the rate of Zr solution to Zr^{+4} is independent of
potential and amounts to $0.2-1 \cdot 10^{-4} amp/cm^2$. The rate of solution of Zr
pre-etched in HF corresponds to the stationary anodic current density at
the given potential. In the case of Zr with atmospheric oxide films,
the initial average rate of solution is an order higher than the anodic
current through the system, but becomes somewhat lower and almost
constant with time. The proposed mechanism for the solution of passive

Card 1/2   UDC: 620.193.41:669.296

L 04777-67

ACC NR: AP6025725

2

Zr comprises the electrochemical formation of an oxide on the metal surface with subsequent solution of the oxide. At potentials above 0.17 v the rate of solution and anodic current increase rapidly resulting in embrittlement and eventual disintegration of Zr electrodes produced by induction melting. Action on arc melted Zr containing 0.02% C is ten times slower. Tests under potentiostatic conditions were found to be more severe than the corrosion tests run at 100°C. The rate of solution of Zr in concentrated HCl is 2 orders higher than in dilute acid. Orig. art. has: 2 figures.

SUB CODE: 07, 13/ SUBM DATE: 03Apr66/ ORIG REF: 003/ OTH REF: 004

Card 2/2

GIL'MAN, Ya.

Mechanization of cleaning and painting of vertical cylindrical tanks.
Stroitel' 2 no.4-5:33 Ap-My '56.   (MIRA 10:1)
(Tanks) (Painting, Industrial)

GIL'MAN, Ya.

Apparatus for grinding chalk. Stroitel' no.6:11 Je '57. (MLRA 10:9)
(Chalk)   (Crushing machinery)

GIL'MAN, Ya.

GIL'MAN, Ya., inzh.

Precast reinforced concrete grain dryers. Gor.i sel.stroi.
no.8/9:33 Ag-S '57.   (MIRA 10:12)
            (Precast concrete construction)   (Grain elevators)

CHEREPANTSEV, G., inzh.; GIL'MAN, Ya., inzh.

Demonstration building of a dormitory. Stroitel' no.4:3-4 Ap '58.

(MIRA 11:5)

(Rostov-on-Don--Student housing)

GEL'FREYKH, V., arkhitektor; KORABEL'NIKOV, A., arkhitektor; GOLUBOVSKIY,
    L., arkhitektor; GIL'MAN, Ya., inzh.

Design of an apartment house with rolled reinforced concrete
components executed by the Institute for the Design and Planning
of Housing and Civil Construction in the City of Moscow. Zhil.
stroi. no.4/5:38-42 '58.   (MIRA 12:6)
                    (Apartment houses)
            (Architecture--Designs and plans)

26265
S/194/61/000/005/027/078
D201/D303

18 6260   1327 1121

.UTHOR: Gil man Yu.

TITLE: Electric simulation of frames with offset joints
                 taking into consideration the elastic fixing-in of
                 struts

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika,
                 no. 5, 1961, 34, abstract 5 B246 (Tr. 1-y mezhvuz.
                 nauchno-tekhn. konferentsii po elektr. modelirovan-
                 iyu zadach stroit. mekhan., soprotivleniya material-
                 ov i teorii uprugosti, B.m. Novocherk. politekhn.
                 in-t, 1960, 120-129)

TEXT: The possibility is considered of using the electric analogue
ЭММС-1 (EMMS-1) for designing flat frames with offset joints and
taking into consideration the effect of yielding of the base ,on the
stresses resulting in the frame. It is emphasized that use of elec-
tric analogues reduces by many times the process of determining

Card 1/2

28205
S/194/61/000/005/027/078

Electric simulation...   D201/D303

stresses and obviates complicated calculations. When designing the
analogue it is easy to take into consideration the effect of yield-
ing of the base on bending moments within the frame. The discrepan-
cies between the analytical and analogue results of calculations is
about 5% which shows the accuracy and effectiveness of the method
discussed. 10 figures. 8 references. ⎾ Abstracter's note: Com-
plete translation ⏌

Card 2/2

GIL'MAN, Ya.D.

Preparing the foundation of a large-panel building on sagging
soil. Osn., fund. i mekh. grun. 3 no.3:25-26 '61.
(MIRA 14:7)

(Soil stabilization) (Foundations)

LOMIZE, G.M., doktor tekhn.nauk, prof.; GIL'MAN, Ya.D., inzh.

Electric spark method of compacting soil. Gidr. stroi. 32
no.6:42 Je '62.   (MIRA 15:6)
(Soil stabilization)

LOMIZE, G.M., prof., doktor tekhn. nauk; GIL'MAN, Ya.D., inzh.

Compacting soils by electric discharges. Trudy Giprovodkhoza
no.22:155-162 '63.   (MIRA 17:8)

GIL'MAN, Ya.D.

Influence of electric discharges on sandy soils. Osn., fund.
i mekh. grun. 5 no.5:8-10 '63.   (MIRA 16:10)

DENISOV, V.A. (Rostov-na-Donu); AMELYEV, V.V. (........
GILLMAN, Ya.D. (Rostov-na-Donu)

"Manual for designing foundation beds and foundations of buildings and structures on sagging soils," by .. . Grigorian. Osn., fund. i mekh.grun. 8 no.1:38 '66.

(MIRA 19:1)

YEGORSHIN, V.P., prof.; GIL'MAN, Ye.A., red.; VOZNESENSKIY, A.D., tekhn.red.

[Theoretical mechanics; test assignments 1-4 for correspondence
students in Course 2 with engineering majors in agricultural colleges]
Teoreticheskaia mekhanika; kontrol'nye zadaniia 1-4 dlia studentov-
zaochnikov II kursa inzhenernykh spetsial'nostei sel'skokhoziaistven-
nykh vuzov. [Version 7] Variant 7. Sostavil V.P.Egorshin. Moskva,
1958. 9 p.   (MIRA 12:3)

1. Vsesoyusnyy sel'skokhozyaystvennyy institut zaochnogo obrazovaniya.
       (Mechanics--Problems, exercises, etc.)

YEGORSHIN, V.P., prof.; GIL'MAN, Ye.A., red.; VOZNESENSKIY, A.D., tekhn.red.

[Theoretical mechanics; test assignments 1-4 for correspondence
students in course 2 with engineering majors in agricultural
colleges] Teoreticheskaia mekhanika; kontrol'nye zadaniia 1-4
dlia studentov-zaochnikov II kursa inzhenernykh spetsial'nostei
sel'skokhoziaiastvennykh vuzov. [Version 3.] Variant 3. Sostavil
V.P.Egorshin. Moskva, 1958. 10 p.   (MIRA 12:3)

1. Vsesoyuznyy sel'skokhozyaystvennyy institut zaochnogo obrazovaniya.
              (Mechanics—Problems, exercises, etc.)

ANDRIANOV, V.N., prof.; DRUZHININA, N.A., assistent; MISHARINA, Ye.A.,
    kand.tekhn.nauk; NIKONOV, L.V., dotsent; SHPRINK, B.E., prof.,
    retsenzent; GLEBOVICH, A.A., kand.tekhn.nauk; GIL'MAN, Ye.A.,
    red.; VOZNESENSKIY, A.D., tekhn.red.

[Electric machines; instructions and assignments for students
specializing in the electrification of agriculture] Elektricheskie
mashiny; metodicheskie ukazaniia i kontrol'nye zadaniia dlia stu-
dentov spetsial'nosti "elektrifikatsiia sel'skokhoziastvennogo
proizvodstva." Pod red. V.N.Andrianova i A.A.Glebovicha. Moskva,
Mosk. in-t mekhanizatsii i elektrifikatsii sel'.khoz., 1958. 56 p.
                                               (MIRA 12:2)
                    (Electric machinery)

ZHURAVEL', I.V., dotsent; FLEKSER, Ya.N., doktor tekhn.nauk, red.;
GIL'MAN, Ya.A., red.; VOZNESENSKIY, A.D., tekhn.red.

[Hydraulics; control lessons for correspondence students
in engineering faculties majoring in irrigation and drainage]
Gidravlika; kontrol'nye zaniatiia dlia studentov-zaochnikov
gidromeliorativnoi spetsial'nosti inzhenernogo fakul'teta.
Balashikha, 1959. 20 p.   (MIRA 14:12)

1. Balashikha, Vsesoyuznyy sel'skokhozyaystvennyy institut
zaochnogo obrazovaniya.
             (Hydraulics)

TOMILIN, A.G., prof.; GIL'MAN, Ye.A., red.

[System of the animal world (characteristics of basic groups)]
Sistema zhivotnogo mira (kharakteristika osnovnykh grupp); ucheb-
noe posobie dlia studentov zootekhnicheskogo i agronomicheskogo
fakul'tetov. Moskva, Vses.sel'khoz.in-t zaochnogo obrazovaniia,
1962. 34 p.   (MIRA 16:2)
            (Zoology)

GIL'MANOV, G. R

Qualified personnel for automatically controlled machinery. Prof.-
tekh. obr. 20 no.4:28-29 Ap '63.   (MIRA 16:5)

1. Direktor uchebno-kursovogo kombinata neftepromyslovogo upravleniya
"Oktyabr'skneft'", Bashkirskaya ASSR.
                    (Petroleum workers--Education and training)

ANISIMOV, Nikolay Gerasimovich; GIL'MANOV, Gilemdar Rizvanovich;
    STRATIYEV, Valentin Ivanovich; USTASHEVSKAYA, G.A., red.

[Frequency-type remote control system for oil fields]
Chastotnaia sistema telemekhanizatsii neftepromyslov.
Ufa, Bashkirskoe knizhnoe izd-vo, 1962.   83 p.
                                    (MIRA 17:7)

GIL'MANOV, G.R.; YURCHENKO, V.I.; SANNIKOV, A.V.

Determining the pressure on the intake of an electric centrifugal
sinking pump by means of a frequency transducer. Nefteprom. delo
no.9:26-29 '65.   (MIRA 18:10)

1. Nauchno-issledovatel'skaya laboratoriya no avtomatike i
telemekhanike neftepromyslovogo upravleniya "Oktyabr'skneft'".

GIL'MANOV, G.R.

Means for reducing oil and gas losses in fields of the
Petroleum Production Administration of the Association of
the October Petroleum Industry. Nefteprom.delo no.10:
27-31 '65.   (MIRA 19:1)

1. Neftepromyslovoye upravleniye "Oktyabr'skneft'".

VALIULLIN, A.V.; GIL'MANOV, I.G.; KHASANOV, Kh.Kh.; KOROL'CHUKA, V.M.,
        red.; LODVIKOVA, A.S., red. izd-va; NABIULLINA, R.S., tekhn.
        red.

    [Fruit culture of the Tatar A.S.S.R.] Sadovodstvo Tatarskoi ASSR.
    Kazan', Tatarskoe knizhnoe izd-vo, 1960. 279 p.   (MIRA 14:9)
              (Tatar A.S.S.R.—Fruit culture)

YAKOVLEVA, V.I.; KRETOVICH, V.L.; GIL'MANOV, M.K.

Localization of glutamate dehydrogenase in corn roots. Biokhimiia
29 no.3:463-469 My-Je '64.   (MIRA 18:4)

1. Institut biokhimii imeni Bakha AN SSSR, Moskva.

YAKOVLEVA, V.I.; KRETOVICH, V.L.; GIL'MANOV, M.K.

Glutamic dehydrogenase of corn roots. Biokhimiia 29 no.5:
896-904 Jl-Ag '64.   (MIRA 18:11)

1. Institut biokhimii imeni Bakha AN SSSR, Moskva.

GIL'MANOVA, G.A.

      Surplus callus formation following femoral fracture. Med.zhur. Uzb.
no.11:68-70 N '60.   (MIRA 14:5)

      1. Iz Uzbekskogo nauchno-issledovatel'skogo instituta travmatologii
i ortopedii (direktor - A.Sh.Shakirov).
                   (FEMUR—FRACTURE)

GIL'MANOVA, G. Kh., BOYKO, V.A., LAPSHINA, G. N.

"The importance of gamasidae in the maintenance of a focus of tickborne encephalitis."   Page 67

Desyatoye soveshchaniye po parazitlogicheskim problemam i prirodnoochagovym boleznyam. 22-29 Oktyabrya 1959 g. (Tenth Conference on Parasitological Problems and Diseases with Natural Foci 22-29 October 1959), Moscow-Leningrad, 1959, Academy of Medical Sciences USSR and Academy of Sciences USSR, No. 1   254pp.

GIL'MANOVA, G. KH., BOYKO, V. A., STEFANOV, K. D., LAPSHIN, G. N., GUBAIDULLI, YU. SH.

"The study of the natural foci of tickborne encephalitic in the TASSR".
Page 69

Desyatoye soveshchaniye po parazitlobicheskim problemam i prirodnoochagovym
boleznyam. 22-29 Oktyabrya 1959 g. (Tenth Conference on Parasitlological
Problems and Diseases with Natural Foci 22-29 October 1959), Moscow-
Leningrad, 1959, Academy of Medical Sciences USSR and Academy of Sciences
USSR, No. 1   254pp.

GIL'MANOVA, G. Kh.; BOYKO, V.A.; LAPSHINA, G....

Participation of Gamasidae mites in the circulation of tick-borne encephalitis virus in the natural foci of the Tatar A.S.S.R. Med. paraz. i paraz. bol. 33 no.2:157-161 Mr-Ap '64
(MIRA 18:1)

1. Kazanskiy nauchno-issledovatel'skiy institut epidemiologii, mikrobiologii i gigiyeny (direktor I. Ye. Alatyrtseva).

GUMEROVA, M.Kh.; ARISTCVA, T.V.; GIL'MANOVA, R.G.; L'VOV, F.V.; BUKCHANTAYEVA,
M.S.; MUKHAMETSHINA, M.A.; GAYNULLINA, N.M.; KHRAMOVA, N.P.;
KOBRANOVA, I.N., red.; LABUDIN, N.T., red.; IBROGIMOVA, Z.A.,
tekhn.red.

[Forty years of the Tatar A.S.S.R.; statistical collection]
Tatarskaia ASSR za 40 let; statisticheskii sbornik. Kazan',
Tatarskoe knizhnoe izd-vo, 1960. 171 p.   (MIRA 14:3)

1. Tatar A.S.S.R. Statisticheskoye upravleniye. 2. Nachal'nik
Statisticheskogo upravleniya Tatarskoy ASSR (for Kobranova).
                    (Tatar A.S.S.R.--Statistics)

GILMANSHIN, G. G.

GIL'MANSHIN, G.G.

SOV/2019

PHASE I BOOK EXPLOITATION

TABLE OF CONTENTS:

80061

S/020/60/132/01/35/064
B011/B126

5.2400(A)

AUTHORS: Mochalov, K. N., Gil'manshin, G. G.

TITLE: The Polarographic Behavior of Sodium-, Potassium-, and Lithium Boron Hydrides

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 1, pp. 134-137

TEXT: The views on the theme in the title are directly contradictory (Refs. 6,7) in the few (2) relevant works. In their experiments the authors used commercial ($\sim$80%) and purified (98%) boron hydrides. They used the micropolarograph of Heyrovský, model M-102 with a dropping mercury electrode. For $NaBH_4$ in NaOH they have found a single wave, namely that of the ion BH_4^-. Its nature was determined by further experiments (Fig. 1, Table 1). The position and character of these waves remain practically unchanged through variations in the concentration of boron hydride and through changes in the composition of the background. This result disproves the data of R. L. Pecsok (Ref. 6). The authors studied the dependence of the height of the boron hydride wave on the concentration of BH_4^- ions. The dependence is linear between 10^{-3} and 10^{-1} moles/l. The limiting current here is no complete diffusion current. The metallic boron hydrides

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decompose relatively quickly in aqueous, especially in acid solutions, so that the polarographing is made very difficult. Therefore, the solutions used were prepared with the use of the relevant alkalis and alkaline borate buffer mixtures. From this it was established that, for the same concentration, the wave height is highly dependent on the pH in the solution. With a pH above 12.5 the boron hydrides are relatively stable, but the wave was practically missing altogether. Thus, it follows that in reality the wave does not belong to the BH_4^- ion, but to one of its hydrolysis products. These occur in several stages in one of which diborane is given off under certain conditions. However, diborane can react with alkalis and form the so-called hypoborates (see scheme). Gaseous diborane was passed through concentrated KOH-, NaOH-, and LiOH solutions when cooled. The resulting hypoborate solutions showed the same wave with $E_{1/2}$ = -0.6 v. The dilution of these solutions led to a proportional decrease in wave height. When the solution is left standing, the height of the "hypoborate" wave, exactly as the "boron hydride" wave, decreases according to an equation of the first order (Ref. 8). When the solutions are boiled and strongly acidified, the wave disappears after the destruction of the hypoborates. Thus, the "boron hydride" wave is basically a "hypoborate" wave. It is difficult to say to which of the 3 hypoborates the wave belongs. However, it cannot belong to the $BH_3^-(OH)$

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The Polarographic Behavior of Sodium-, Potassium-, and Lithium Boron Hydrides

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ion. It is more likely that the $BH(OH)_3^-$ ion is responsible for the wave. The electrodic reaction which the said wave causes can obviously not (contrary to Pecsok) be brought about by oxidation of the BH_4^- ions, but must be due to the oxidation of the hypoborate ions (see scheme). Of the two schemes set out, the second is more likely. The following are mentioned: D. Il'kovič, A. F. Zhigach, V. I. Mikheyeva, V. Yu. Surs, Kh. V. Shifrin, A. A. Bogonostsev, O. I. Rusetskiy, and T. N. Dymova. There are 1 figure, 1 table, and 14 references, 4 of which are Soviet.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii Akademii nauk SSSR (Institute of General and Inorganic Chemistry of the Academy of Sciences, USSR)

PRESENTED: December 26, 1959, by I. I. Chernyayev, Academician

SUBMITTED: December 15, 1959

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37638
S/076/62/036/005/013/013
B101/B110

//.)Y/0

AUTHORS: Mochalov, K. N., and Gil'manshin, G. G.

TITLE: Polarographic study of alkali-metal boron hydrides

PERIODICAL: Zhurnal fizicheskoy khimii, v. 36, no. 5, 1962, 1089-1094

TEXT: With a view to elucidating the processes that occur in the
hydrolysis of $NaBH_4$, KBH_4, $LiBH_4$, and C_5BH_4 solutions of these boron
hydrides were examined polarographically in aqueous solutions by using a
recording polarograph (type 7-77-46, "orion", Hungary), a mercury dropping
electrode, and a calomel reference electrode. The boron hydrides were
prevented from decomposing by being dissolved respectively in 0.2 M NaOH,
KOH, and LiOH. Investigation of the polarization within the range +0.2
to -2.0 v at room temperature showed that, unlike what had been found by
R. L. Pecsok (see below), the three boron hydrides gave rise to the same
wave, namely $E_{1/2}$ = -0.65 v. Impurities (e.g., sodium alcoholates) did
not affect $E_{1/2}$. As a result of hydrolysis of the boron hydride, the
wave amplitude decreased with time. This process can be accelerated by

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acidification, heating, or catalysis. Different backgrounds did not affect the wave. The wave $E_{1/2}$ = +0.105 - 0.013 pH found by Pecsok is attributed to the anodic dissolution of Hg in an alkaline medium. Results: (a) Change in pH and temperature ($15-35^{\circ}C$) do not affect the wave potential. The wave amplitude of $NaBH_4$ and KBH_4 in the range of $1 \cdot 10^{-3}$ to $1 \cdot 10^{-4}$ moles/l is a linear function of the concentration of boron hydride. (b) The wave amplitude decreases with increasing pH. At pH >12.5 - i.e., if no hydrolysis takes place at all - no further waves will appear. Polarographic analysis of CaH_2 and B_2H_6 showed no wave with the first compound, but $E_{1/2}$ = -0.65 v when B_2H_6 was bubbled through NaOH or KOH. From this it is concluded that the wave is due to the resulting hypoborates. Polarographic results obtained from stepwise hydrolyzed $LiBH_4$ and from $NaBH(OCH_3)_3$ indicate that the wave is not produced by the BH_4^- ion but by the $BH(OH)_3^-$ ion. Analysis of the polarographic kinetic curves for $NaBH_4$ and KBH_4 confirmed that the hydrolysis of these compounds followed the theory of the kinetics of consecutive processes. There are

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Polarographic study of alkali- ...

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B101/B110

4 figures and 2 tables. The most important English-language reference is:
R. L. Pecsok, J. Amer. Chem. Soc., 75, 2862, 1953.

ASSOCIATION: Kazanskiy khimiko-tekhnologicheskiy institut im. S. M.
               Kirova (Kazan' Institute of Chemical Technology imeni S. M.
               Kirov)

SUBMITTED: August 19, 1961

Card 3/3

L 59535-65   EWP(e)/EWT(m)/EPF(c)/EWP(i)/EWG(m)/EWP(j)/T/EWP(t)/EWP(h)   Pc-4/Pr-4
IJP(c)   JD/WH/RM

ACCESSION NR: AP5016815   UR/0195/65/006/003/0541/0544
                                                 542.938 : 541.44 : 546.27

AUTHOR: Mochalov, K. N.; Khain, V. S.; Gil'manshin, G. G.

TITLE: Kinetic investigation of the intermediate stages of BH_4^--ion hydrolysis

SOURCE: Kinetika i kataliz, v. 6, no. 3, 1965, 541-544

TOPIC TAGS: hydrolysis, sodium borohydride, kinetics

ABSTRACT: Kinetics of the elementary steps of the consecutive reaction sequence of the hydrolysis of sodium borohydride was studied at pH of 9.57 to 13.38 and at 15°, 25°, and 35 ± 0.1°C. The ionic strength of the buffer solutions used was 0.4 at 25°C. The object of this work was to elucidate the mechanism of hydrolysis of boro-hydrides. Hydrolysis of the most stable intermediate ions [BH_3OH^-, $BH_2(OH)_2^-$, and $BH(OH)_3^-$] was studied separately using alkaline solutions of $NaBH_3OH$, $NaBH_2(CH)_2$, and $NaBH(CH)_3$. The pH was measured with an accuracy of 0.01 using a Danish made pH-meter (Radiometer 72 Emdrupvej, Copenhagen). In the consecutive reaction of hydro-lysis of the BH_4^--ion, the following step is rate limiting: $BH_4^- \rightarrow BH_3OH^-$. This rate limiting step is made up of two elementary steps and it initiates according to:

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$BH_4^- + H^+ \rightarrow [H^+BH_4^-]$. The intermediate ions, BH_3OH^- and $BH_2(OH)_2^-$, are slightly less stable than the BH_4^--ion. The least stable of the intermediate ions is $BH(OH)_3^-$ which hydrolyses about 1000 times faster than BH_3OH^- and $BH_2(OH)_2^-$. Hydrolysis of $NaBH_4$, $NaBH_3OH$, $NaBH_2(OH)_2$, and $NaBH(OH)_3$ is a first order reaction. The values of the first order rate constants and the times for half-conversion at given pH and temperature deviated 5 to 7% from the respective average values for the series of experiments. At a given temperature the rate of hydrolysis is inversely proportional to pH. The first order rate constant for all elementary hydrolysis steps is proportional to the activity of the hydrogen ions a_H^+. The overall kinetic equation of $NaBH_4$ hydrolysis is:

$$-\frac{dC}{dt} = K_2 \cdot C \cdot a_H^+$$

where: C is concentration of $NaBH_4$, at time t, a_H^+ is activity of the hydrogen ions, and K_2 is the second order rate constant. K_2 is dependent only upon reaction temperature. The thermal coefficient of the rate constant in the 15° to 35°C range for $NaBH_4$, $NaBH_3OH$, $NaBH_2(OH)_2$ and $NaBH(OH)_3$ is 2.02, 1.85, 1.83 and 1.83 respectively. The corresponding energies of activation are 12.8, 11.2, 11.0, and 11.0 kcal/mol. Dependence of the individual rates of hydrolysis K_T upon temperature (T)

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and dependence of the respective half-conversion times ($\tau\frac{1}{2}$) upon temperature (T)
and pH are:

$$NaBH_4 \qquad \ln K_T = -\frac{6440}{T} + 40.20; \qquad \lg \tau_{1/2} = pH - (0.034T - 1.92)$$

$$NaBH_3O \quad H \quad \ln K_T = -\frac{5037}{T} + 37.88; \qquad \lg \tau_{1/2} = pH - (0.027T + 0.357)$$

$$NaBH_2(OH)_2 \quad \ln K_T = -\frac{5544}{T} + 37.63; \qquad \lg \tau_{1/2} = pH - (0.027T + 0.384)$$

$$NaBH(OH)_3 \qquad \ln K_T = -\frac{5444}{T} + 37.63; \qquad \lg \tau_{1/2} = pH - (0.024T + 4.00).$$

Replacement of sodium by Li, K, or Fe affects neither the overall rate nor the rates
of the individual steps of hydrolysis of the respective hydrides and hydroxyhydrides.
Orig. art. has: 1 table, 2 figures, 11 formulas.

ASSOCIATION: Kazanskiy khimiko-tekhnologicheskiy institut im. S. M. Kirova (Kazan
Chemical Technological Institute)

SUBMITTED: 18May64   ENCL: 00   SUB CODE: GC

NO REF SOV: 005   OTHER: 007

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L 57778-65   EFF(c)/EPR/EWA(h)/EWP(j)/EWT(m)   Pc-4/Pr-4/Ps-4   RPL
ACCESSION NR: AP5014855   RM/WW/JW   UR/0020/65/162/003/0613/0616

AUTHOR: Mochalov, K.N.; Khain, V.S.; Gil'manshin, G.G.

TITLE: Generalized mechanism of hydrolysis of the borohydride ion and diborane

SOURCE: AN SSSR. Doklady, v. 162, no. 3, 1965, 613-616

TOPIC TAGS: diborane hydrolysis, borohydride hydrolysis, borohydride ion, hydrolysis kinetics
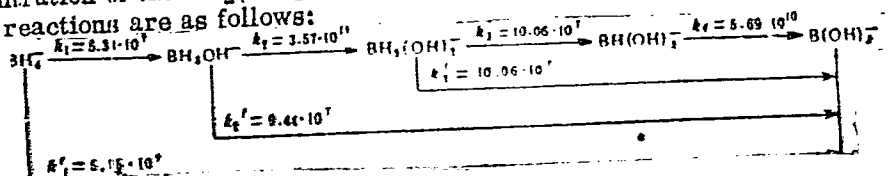
ABSTRACT: On the basis of tabulated data, the authors have formulated a single, general mechanism encompasing the hydrolysis of the borohydride ion and diborane in neutral, acid, and alkaline media. In order to determine the relative rates of the various successive reactions of this mechanism, a study was made of the kinetics of the conversions $BH_4^- \rightarrow BH_3OH^-$, $BH_3OH^- \rightarrow BH_2(OH)_2^-$, and $BH_2(OH)_2^- \rightarrow BH(OH)_3$. It was noted that the rate of reaction of potassium ferricyanide with a solution of borohydride is determined by the rate of hydrolysis of the latter, and that this rate coincides with the rate of conversion of BH_4^- to the BH_3OH^- ion. Hence, the conversion $BH_4^- \rightarrow BH_3OH^-$ (via the intermediate complex $H^+BH_4^-$) is the rate-determining step of the consecutive reaction of borohydride hydrolysis. The conversion $BH_2(OH)_2^- \rightarrow BH(OH)_3^-$ is the first step in the hydrolysis of $BH_2(OH)_2^-$ to the borate; the second stage of this process,

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ACCESSION NR: AP5014855

$BH(OH)_3^- \rightarrow B(OH)_4^-$, is approximately 500 times faster than the first. It is apparent that an aqueous solution of borohydride constitutes a complex system made up of many components. The concentrations of the latter were found, and the quantitive composition of the system was determined at various points in time; the concentrations of the BH_3OH^- and $BH(OH)_3^-$ ions remain low (0.03-0.05 mole%) during the entire process, whereas the concentration of the $BH_2(OH)_2^-$ ion attains 25.7 mole %. The rate constants of the consecutive reactions are as follows:

$$BH_4^- \xrightarrow{k_1=5.31 \cdot 10^7} BH_3OH^- \xrightarrow{k_2=3.57 \cdot 10^{11}} BH_2(OH)_2^- \xrightarrow{k_3=10.06 \cdot 10^7} BH(OH)_3^- \xrightarrow{k_4=5.69 \cdot 10^{10}} B(OH)_4^-$$

$$k_1'=10.06 \cdot 10^7$$

$$k_2'=9.44 \cdot 10^7$$

$$k_1'=5.15 \cdot 10^9$$

Orig. art. has: 3 tables and 8 formulas.

ASSOCIATION: Kazanskiy khimiko-tekhnologicheskiy institut im. S. M. Kirova (Kazan' Chemical Engineering Institute)

SUBMITTED: 06Nov64   ENCL: 00   SUB CODE: GC

NO REF SOV: 007   OTHER: 011

Card 2/2

SATTAROV, M.M.; GIL'MANSHIN, I.G.

Selection of wells for the carrying out of water-exclusion
operations. Izv. vys. ucheb. zav.; neft' i gaz 6 no.7:43-47
'63.   (MIRA 17:8)

1. Ufimskiy neftyanoy institut i neftepromyslovoye upravleniye
"Arlanneft'".

IMANAYEV, N.G.; GOMBINER, B.Ya.; KRAVCHENK , I.I.; BLAZHEVICH, V.A.;
     MARKOV, V.F.; SATTAROV, M.M.; GIL'MANSHIN, I.G.; ASHIROV, K.B.;
     BOBELYUK, V.F.; ROMANYUK, F.I.

Comments on the article by M.L. Surguchev "Exclusion of reservoir
waters". Neft.khoz., No.11, 1962. Neft.khoz. 41 no.8:38-57 Ag '63.

Present status of and prospects for the construction of steel
tanks in the U.S.S.R. Ibid.:58-62

1. Neftepromyslovoye upravleniye Tuymazaneft' (for Im   ev,
Gombiner). 2. Ufimskiy neftyanoy nauchno-issledovatel'skiy
instit (for Kravchenko, Blazhevich). 3. Neftepromyslovoye
upravleniye Chernomorneft' (for Markov). 4. Neftepromyslovoye
upravleniye Arlanneft' (for Sattarov, Gil'manshin). 5. Gosudar-
stvennyy institut po proyektirovanivu i issledovatel'skim
rabotam neftedobyvayushchey promyshlennosti vostochnykh rayonov
strany (for Ashirov). 6. Vsesoyuznyy neftegazovyy nauchno-
issledovatel'skiv institut (for Bobelyuk, Romanyuk).
                                        (MIRA 17:10)

GILMEANU, Ion

After fourteen days the sections are reporting. Const Buc
16 no.732:2   18 Ja'64.

TROYANKIN, Yu.V., kand. tekhn. nauk; GIMMEL'FARB, M.L., dots., red.

     [Methods for the design of a copper-melting reverberatory
     furnace] Metodika rascheta medeplavil'noi otrazhatel'noi pechi.
     Pod red. M.L.Gimmel'farba. Moskva, Mosk. energ. in-t, 1963.
     30 p.   (MIRA 17:4)

GORDON, M.K.; GIL'MOVSKAYA, M.I.

Clinical aspects of an atypical course in Addison-Biermer disease.
Zdrav. Bel. 7 no. 4:43-45 Ap '61.   (MIRA 14:4)

1. Iz terapevticheskogo otdeleniya (M.K. Gordon) oblbol'nitsy
v g. Vileyka (glavnyy vrach A.S. Romashko). Nauchnyy
rukovoditel' raboty - professor G.Kh. Davgyallo.
                         (ANEMIA)

GIL'O, Georgiy Genrikhovich; MIL'CHIN, A.E., redaktor; VOLYNTSEVA,
V.A., tekhnicheskiy redaktor.

[Laboratory work in the technology of typesetting by hand and
machine] Laboratornye raboty po tekhnologii ruchnogo i mashin-
nogo nabora. Moskva, Gos. izd-vo "Iskusstvo," 1954. 110 p.
    (Typesetting)   (MLRA 7:12)

GIL', Georgiy Genrikhovich; GULYn-YANOVSKIY, Vasiliy Vasil'yevich; TEMKIN, Grigoriy Yakovlevich; NIKANOROVA, Ye.V., redaktor; CHICHERIN, A.N., tekhnicheskiy redaktor

[Continuity of production in the Evg.Sokolova typesetting plant]
Potochnost' proizvodstva v nabornom tsekhe tipografii imeni Evg. Sokolovoi. Moskva, Gos.izd-vo "Iskusstvo," 1957. 92 p.
           (Typesetting)   (MLRA 10:10)

ACC NR: AT7000188   SOURCE CODE: UR/0000/64/000/000/0162/0170

AUTHOR: Volodarskiy, R. F.; Gilod, D. A.; Demidova, M. A.

ORG: none

TITLE: Sketch map of the present-day surface of the folded basement of the Ciscaucasus from geophysical data

SOURCE: Moscow. Universitet. Kafedra geofizicheskikh metodov issledovaniya zemnoy kory. Geofizicheskiye issledovaniya (Geophysical research), no. 1. Moscow, Izd-vo Mosk. univ., 1964, 162-170

TOPIC TAGS: geologic survey, tectonics, earth crust, gravity survey, magnetic survey/Russian platform, Ciscaucasus

ABSTRACT: Comprehensive analysis of geologic, geophysical, and borehole materials, as well as analysis of gravity and magnetic maps recomputed for different levels of the upper half space, have resulted in a tectonic regionalization of the Ciscaucasus and the solution of problems dealing with the geologic structure of the area. The article contains maps of the tectonic zoning of the folded basement of the Cis- caucasus and the southern regions of the Russian platform and surface of the Paleo- zoic basement of the Ciscaucasus are given. Orig. art. has: 2 figures.

SUB CODE: 08/ SUBM DATE: 05Nov64/ ORIG REF: 013/

Card   1/1

KARAPETOV, K.A.; GILOVYAN, V.A.

Investigation of a reduction in well-bottom permeability based on
the pressure buildup curves. Nefteprom. delo no.12:3-8 '63.

(MIRA 17:4)

1. TSekh nauchno-issledovatel'skikh i proizvodstvennykh rabot
neftepromyslovogo upravleniya "Ordzhonikidzeneft'".

MAMEDOV, A.M.; BYCHKOVA, T.V.; GILOVYAN, V.A.

Determining the optimal disbursement of a demulsifier from the
data of an investigation of compressor wells. Nefteprom. delo
no.10:37-40 '64.   (MIRA 17:12)

1. Neftepromyslovoye upravleniye "Ordzhonikidzeneft'".

GILOVYAN, V.A.; SHALABANOV, A.S.

New method for the automatic control of the level of the oil-water interface in the Lobkovo horizontal sedimentation tanks. Nefteprom. delo no.1:24-28 '65.
(MIRA 18:3)

1. TSekh nauchno-issledovatel'skikh i proizvodstvennykh rabot neftepromyslovogo upravleniya "Ordzhonikidzeneft'".

KALUZHNII, G. D.; GIL'SHTEYN, P. M.

Plows

New plows PKB-56P and PKB-2-54 for brush and swamp ground. Sel'khozmashina No. 9, 1952

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POB-3-45 plow for reclaimed swamps. Sel'khozmashina no.11:12-13
N '55.   (Plows)
                                               (MLRA 9:1)

GIL'SHTEYN, P.M., inzhener.;STARODIBSKIY, D.Z., inzhener.

New brush and bog plows. Sel'khosmashina no.4:5-6 Ap '57. (MLRA 10:4)
(Plows)

GIL'SHTEYN, P.M., inzh.; STARODINSKIY, D.Z., inzh.

Automatic equipment for mounting machines on tractors. Trakt. i
sel'khozmash. no.11:13-16 N '58.
(Agricultural machinery)   (MIRA 11:11)

GIL'SHTEYN, P.M.,inzh.; STARODINSKIY, D.Z.,inzh.

The FBN-2-60 mounted brush-breaker and bog plow.   Trakt. i sel'-
khosmash.   no.1:38-39 Ja '59.   (MIRA 12:1)
                        (Plows)

GIL'SHTYN, P.K.; STARODIMSKIY, D.Z.

       Brush-breaker plow. Trakt.i sel'khozmash. no.7:33-34 Jl '59.

                                                     (MIRA 12:11)
       1. Spetsial'noye konstruktorskoye byuro zavoda imeni Oktyabr'skoy revolyutsii.

                          (Plows)

GIL'SHTEYN, P.M., inzh.; STARODINSKIY, D.Z., inzh.

Mounted scarifier for cultivating soil before deep plowing. Trakt.i sel'khozmash. no.10:30 O '59.

(MIRA 13:2)

1. Spetsial'noye konstruktorskoye byuro zavoda im. Oktyabr'skoy revolyutsii.

(Agricultural machinery)

GIL'SHTEYN, P.M., [Hil'shtein, P.M.]; STARODINSKIY, D.A. [Starodyns'kyi, D.Z.], inzh.

Mounted two-bottom brush-breaker plow. Mekh.sil'.hosp. 10 no.12:24-25 D '59.   (MIRA 13:3)
          (Plows)

GIL'SHTEYN, P.M., STARODINSKIY, D.Z

Mounted cultivator and scarifier for stony soils. Trakt. i
sel'khozmash. 30 no.8:37 Ag '60.   (MIRA 13:8)
                        (Cultivators)

GIL'SHTEYN, P.M., inzh.; BLOSHTEYN, E.V., inzh.

Mounted mulch-culture cultivator with subsurface sweeps. Trakt.
i sel'khozmash. 30 no.11:32-33 N '60.   (MIRA 13:12)
(Cultivators)

GIL'SHTEYN, P.M. [Hil'shtein, P.M.], inzh.; BLOSHTEYN, Ye.V. [Bloshtein, IE.V.], inzh.

KPL-2-100 cultivator with subsurface sweeps. Mekh. sil'. hosp. 12 no. 5:22-23 My '61.

(MIRA 14:5)

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(Cultivators)

GIL'SHTEYN, P.M.; STARODINSKIY, D.Z.

Increase in the traction indices of a wheel-type tractor operating with a mounted plow. Trakt.i sel'khozmash. 32 no.9:16-18 S '62.
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(Tractors)   (Plowing)

GIL'SHTEYN, P.M.; STARODINSKIY, D.Z.

Single-frame plows for brush and swamp lands. Trakt; i sel'khozmash. 31 [i.e.32] no.11:33-34 N '62.

(MIRA 15:12)

1. Spetsial'noye konstruktorskoye byuro zavoda imeni Oktyabr'skoy revolyutsii.

(Plows)

GIL'SHTEYN, P.M.; STARODINSKIY, D.Z.; TSIMMERMAN, M.Z.;
DOGANOVSKIY, M.G., kand. sel'khoz. nauk, retsenzent;
BUD'KO, V.A., inzh., red.

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calculation] Pochvoobrabatyvaiushchie mashiny spetsial'-
nogo naznacheniia; proektirovanie i raschet. Moskva, Izd-
vo "Mashinostroenie," 1964. 139 p.   (MIRA 17:11)

1. Vedushchiy konstruktor Spetsial'nogo konstruktorskogo
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"Rocket Motors," M. Defense Publ. House, 1950

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Use of radioactive isotopes for determination of damage to machine
parts. p. 3. TEHNICA NOUA. (Asociatia Stiintifica a Inginerilor si
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(Toys)

GILULA, M., kand.tekhn.nauk

Requirements for dump trucks used in excavation operations.
Avt. transp. 38 no. 5:13-14 My '60.   (MIRA 14:2)
(Dump trucks)

FIGURA 1.0

BC

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Capacity for work in old age. I. O. Gilein (Trans. Conf.
Sanitary, Kiev, 1938, No. 167).—Capacity for work was not
diminished in individuals of different professions, aged
over 60.   M. K.

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The action of vapors from the production and treatment of ozocerite upon the nervous system. I. O. Gilula (Gigiena i Sanit. 13, No. 11, 31(1948).—In the majority of cases disturbances of the vegetative nervous system take place, with pos. eye-heart reflex, respiratory arrhythmia; frequent cases of blood pressure disturbance (high, low, asymmetric) occur. The effects are traced to the action of hydrocarbons, both acute and chronic cases being observed.   G. M. Kosolapoff

GILULA, I.O.; TSAPENKO, Ye.L.

Cutaneous temperature in lesions of the cerebral cortex.
Zhur.nevr.i psikh. 53 no.11:878-881 N '53.   (MLRA 6:12)

1. Kafedra nervnykh bolezney Kiyevskogo meditsinskogo stomatolo-
gicheskogo instituta.
                    (Brain--Disease) (Temperature, Animal and human)

GILULA, I.O., professor (Kiyev)

Penicillin for treating infectious diseases of the nervous system.
Vrach.delo no.4:431 Ap '57.   (MLRA 10:7)
        (PENICILLIN)   (NERVOUS SYSTEM--DISEASES)

GIZULA, I.O., prof. (Kiyev); NOVIK, I.O., prof. (Kiyev); TSAPENKO,
Ye.L., kand.med.nauk (Kiyev)

Higher nervous activity in patients with paradentosis. Probl.
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            (NERVOUS SYSTEM)   (GUMS--DISEASES)   (MIRA 13:6)

GILULA, I.O., prof. (Kiyev)

Disturbances of sexual functions in some diseases of the nervous
system. Vrach. delo no.5:493-496 My '58   (MIRA 11:7)
            (GENERATIVE ORGANS--DISEASES)
            (NERVOUS SYSTEM--DISEASES)

GILULA, I.O., prof. (Kiyev)

"Neuroses of visceral etiology", by O.R. Kirichins'kii. Reviewed by I.O.
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          (NEUROSES)
          (KIRICHINS'KII,O.R.)

GILULA, I.O., prof.

Disability evaluation for persons with vascular diseases of
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1. Gorodskaya klinicheskaya bol'nitsa, Kiyev.
        (DISABILITY EVALUATION)   (BRAIN--DISEASES)

GILULA, I.O., prof. (Kiyev)

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(MIRA 15:1)

(BRAIN)